UNITED STATES
ENVIRONMENTAL
PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500

Ref: 8EPR-F

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RE: CDPHE Comments on the Draft Conceptual Remediation Design, East Trenches Plume Project

Dear Elizabeth:

This is in response to your letter dated September 18, 1998, in which you commented on the draft Conceptual Remediation Design for the East Trenches Plume. In that letter, you brought up a number of issues that you feel have not been adequately addressed for this particular groundwater plume. It seems that the primary issue that you are concerned about is best stated in the last paragraph of the letter "We are not opposed to installation of this system if a full evaluation shows it to be a good alternative but we do not think that has been demonstrated at this time." This letter will not address every item that you mentioned in your correspondence, but will focus only on the primary issues that were identified as listed below.

Issue Number 1) A full evaluation of the groundwater plume and its impact to surface water was not conducted, therefore it is premature to identify a preferred remedial action.

Response: Although a full evaluation of the impact that this plume would have on surface water has not been formally conducted, in this situation it is already known that surface water has been impacted by the groundwater plume. Existing data shows that the contaminants have been detected in the surface water adjacent to the plume, in the valley fill alluvium between ponds B2 and B3 and above Tier I levels at more than five wells that are within 200 feet of surface water. EPA and DOE assumed that in this circumstance, where surface water is already clearly being impacted by a plume of contaminated groundwater, remedial action to mitigate the situation is appropriate and necessary. This is still our position however, we agree

with CDPHE that the surface water data, including any analyses of seep water, showing this impact should be presented in future documents.

Issue Number 2) Monitored Natural Attenuation should be evaluated as a remedial alternative for this groundwater plume and volatilization of contaminants in surface water should be one of the processes to be used in calculating the naturally occurring reduction of contaminants.

Response: EPA's policy on Monitored Natural Attenuation does list volatilization as one of the physical processes that may be considered when evaluating the naturally occurring degradation of contaminants in situ. However, it specifically and repeatedly refers to soil or groundwater as the only media where this may be considered. The policy, as explained in OSWER Directive 9200.4-17, also states that cross media transfer of contaminants, such as from groundwater to surface water, is not desirable and generally not acceptable. In addition, at the present time, a decision has not been made in regards to the final configuration of the South Walnut Creek drainage. This decision is not likely to be made in the near future, since one of the important factors to influence the configuration is the Actinide Migration evaluation that will not be complete until the year 2000. Therefore, it seems prudent and appropriate to proceed with a remedial action that would not be dependent upon surface water volatilization processes.

Issue Number 3) Other factors should be considered such as impact to ecology, especially to the Prebles Mouse habitat, and the potential for slope stability problems to occur.

Response: EPA has contacted an expert on the ecology of Rocky Flats to ascertain whether the proposed remedial action would adversely impact Prebles Mouse habitat. It is our understanding that in this particular stretch of South Walnut Creek, adjacent to ponds B1, B2 and B3, there is no identified population of Prebles Mice, probably due to the lack of riparian vegetation preferred by the mouse. This species does reside further downstream, so precautions would be necessary to ensure that construction activities do not impact those locations. The final design and action plan would also be provided to the U. S. Fish and Wildlife for review to ensure that it is acceptable in all ecological aspects. EPA anticipates an improvement in the riparian habitat as a result of this remedial action, since groundwater would be cleaned of its contaminants prior to its emergence as surface water. Slope stability may well be a problem during construction of the subsurface wall, as was experienced during the Mound Plume construction project. That project however, was successfully constructed despite this complication. Nevertheless, the final design document for this remedy must address the issue of slope stability, both during and after construction, in as much detail as possible, to determine whether or not it would preclude the installation of this type of system.

In conclusion, EPA is pleased that DOE is proceeding with plans to implement a remedy for the East Trenches groundwater plume in FY 1999, and feels that the proposed reactive wall is the best technology for the situation. Successful design and construction of such a wall is dependent upon an accurate and complete understanding of the hydrogeological properties of the subsurface into which it will be placed. Therefore, a more detailed presentation and evaluation of existing data is needed in the final design document so that the contaminant pathways are more precisely identified and eventually intercepted for treatment. In so doing, DOE should be able to demonstrate that a reactive wall is a good alternative for remediation of the East Trenches groundwater plume. Should you have any questions or comments, please contact me at 303 312-6246.

Sincerely,

Gary Kleeman
Rocky Flats Team

cc: Carl Spreng, CDPHE
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